OAR Box 1851

Prepped by Keeia Richards

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A-90-16

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TOYOTA TECHNICAL CENTER, U.S.A., INC. IV-D-214

ANN ARBOR BRANCH

1588 WOODRIDGE, RR #7, ANN ARBOR, MI 48105, PHONE (313) 769-1350

March 1, 1991

Air Docket Section (LE-131)
U.S. Environmental Protection Agency
Room M-1500
401 M Street, S.W.
Washington, D.C. 20460

Attention : Docket No. A-90-16

Subject : Submission of Toyota's Emission Test Results with MMT Fuel Additive

Toyota submitted the interim emission test results dated October 26th 1990 for a vehicle durability program which had 1/32 g/gallon Mn MMT added to the test fuel.

We have just completed all tests, including additional reference tests for fuel without MMT. Although this data was obtained from one vehicle, the information is being supplied for your information.

The data shows that HC, CO and Particulate Emissions are all adversely affected by the MMT additive. The NOx Emissions were not dramatically affected. The increase in HC corresponds to our past test results with 1/16 g/gallon Mn MMT attached to our comments dated July 20, 1990.

If there are any questions regarding the enclosed information, please contact Mr. K. Kibe of my staff.

Sincerely,

Takao Niwa

Takao Niwa
General Manager
Emission Certification

cc : Ms. Mary T. Smith

1. Test Vehicle and Engine

Vehicle : '90 MY Camry Sedan, 4 A/T
Engine : 3S-FE (2.0L, L4)
Emission Control System : Multipoint Electronic Fuel Injection + 2 Three Way Catalysts (Close-coupled and Underfloor catalysts) + 2 Oxygen Sensors

2. Test Conditions

(1) MMT Additive 1/32 g/gallon Mn

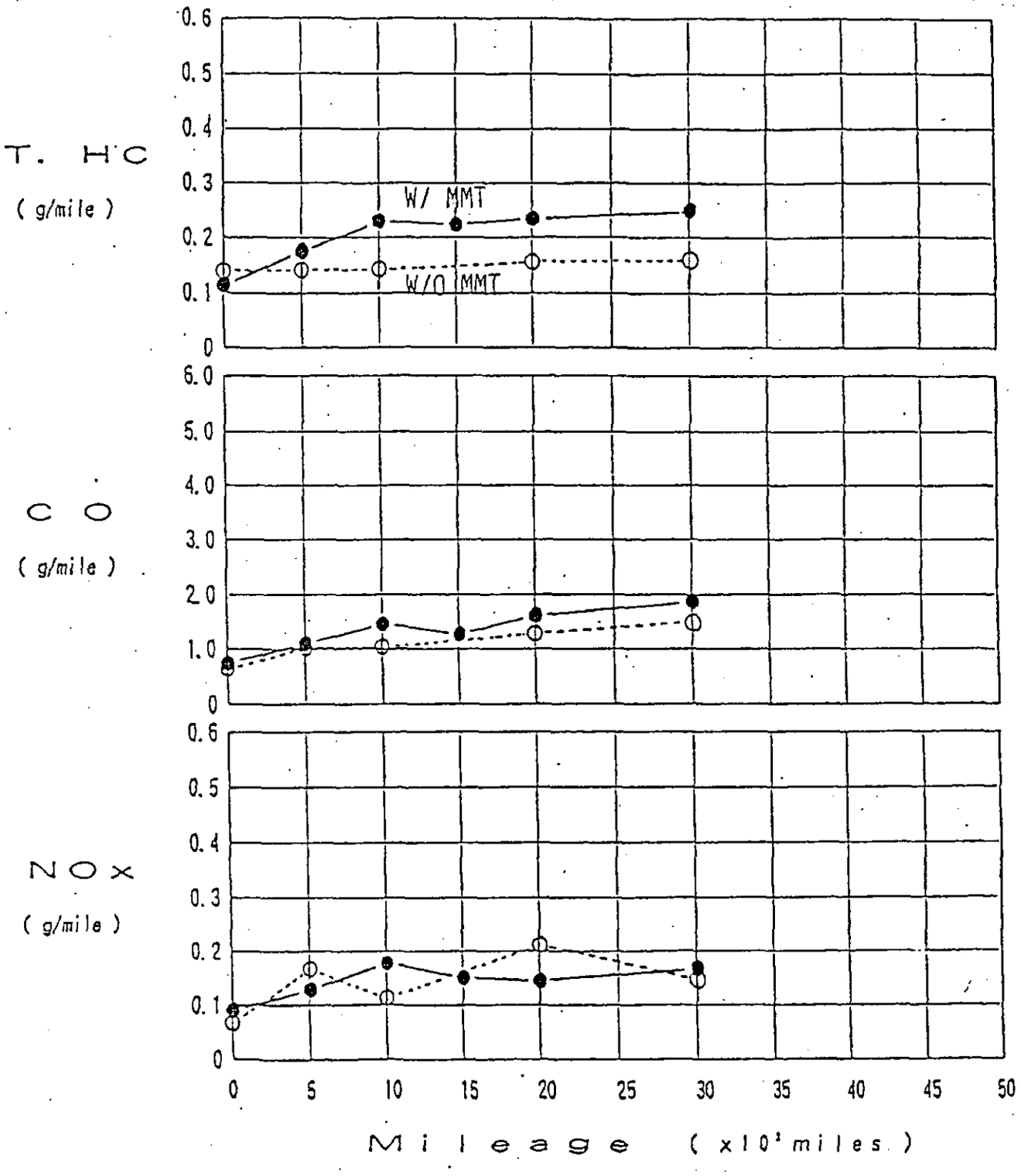
(2) Mileage Accumulation Fuel Characteristics

RON	91.4
MON	81.5
RVP	9.9 psi
Distillation Range	
IBP (Degrees F)	85
10%	119
50%	211
90%	343
EP	402
Olefins (vol. %)	6.8
Aromatics (vol. %)	36.5

(3) Mileage Accumulation Mode
Toyota in-house durability driving mode

(4) Emission Test Fuel
EPA certification test fuel

3. Test Results



Part. (g/mile) at 30 × 10³ miles		
	W/ MMT	0.0045
	W/O MMT	0.0029